

Appl. No. 10/799,898
Amendment dated November 22, 2005
Reply to Office Action mailed September 9, 2005

Amendments to the Claims:

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1. (currently amended): A two-piece, two-stage, reduced energy mechanically-operating cartridge for launching a projectile from a dedicated or modified firearm, comprising:

(a) a piston sleeve comprising a piston sleeve jacket defining a projectile cavity at a first longitudinal end for coupling the projectile therein, and ~~the a~~ second end for coupling with a primary case, and the piston sleeve including one or more partially annular protrusion portions (hereinafter "cogs"); and

(b) the primary case comprising a primary case jacket for being axially coupled with the second end of the piston sleeve, and including one or more complementary cogs to those of the piston sleeve, and defining a primary case cavity for coupling with a propellant mechanism, and

(c) wherein said primary case and piston sleeve are configured such that an axial coupling of the primary case with the second end of the piston sleeve involves the respective cogs of the primary case and piston sleeve being initially offset, and

~~(e)~~ (d) wherein said primary case and piston sleeve are further configured such that upon the axial coupling of the piston sleeve and primary case and at least partial compression together, the primary case and the piston sleeve become relatively rotationally movable to angularly overlap their respective cogs, the angular overlap being present when the sleeve and primary case are set into an at least partially compressed position, such that upon activation, when the piston sleeve and primary case telescope from the static position, the respective cogs meet at a particular longitudinal extent of the cartridge, ~~and~~

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~~— (d) wherein if propellant is manipulated creating an overcharging then piston sleeve will separate from primary case via a sheering action of the cogs releasing excessive energy preventing projectile of traveling at excessive velocity.~~

Claim 2 (currently amended): The cartridge of claim 1, wherein the cogs of the piston sleeve ~~comprising~~ comprise two or more spaced apart cogs.

Claim 3 (original): The cartridge of claim 2, wherein the piston sleeve further comprises channels between the cogs for mating with the complementary cogs of the primary case.

Claim 4 (currently amended): The cartridge of claim 3, wherein the primary case and piston sleeve are configured such that the channels of the piston sleeve slidably couple with the complementary cogs.

Claim 5 (original): The cartridge of claim 1, wherein the cogs of the piston sleeve comprise three or more spaced apart cogs.

Claim 6 (original): The cartridge of claim 5, wherein the piston sleeve further comprises channels between the cogs for mating with the complementary cogs of the primary case.

Claim 7 (currently amended): The cartridge of claim 6, wherein the primary case and piston sleeve are configured such that the channels of the piston sleeve slidably couple with the complementary cogs of the primary case.

Claim 8 (currently amended): The cartridge of claim 1, wherein the piston sleeve comprises a shoulder ~~firearm includes an annular step between the chamber and the barrel,~~ such that upon activation when the piston sleeve and

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primary case are telescoping from the static position, said a shoulder of the ~~piston sleeve~~ contacts an the annular step between a chamber and a barrel of a firearm preventing the sleeve from advancing down the barrel, and instead the primary case thrusts rearward away from the barrel.

Claim 9 (currently amended): The cartridge of claim 8, wherein the piston sleeve and the primary case include a complementary annular protrusion and annular groove pair, in addition to said cogs ~~and said channels~~, for coupling together to axially stabilize the coupling of the piston sleeve and the primary case in the static position.

Claim 10 (currently amended): The cartridge of claim 1, wherein the piston sleeve and the primary case include a complementary annular protrusion and annular groove pair, in addition to said cogs ~~and said channels~~, for coupling together to axially stabilize the coupling of the piston sleeve and the primary case in the static position.

Claim 11 (original): The cartridge of claim 1, wherein the jacket of the piston sleeve comprises a substantially non-deformable material, such that the piston sleeve jacket is reusable.

Claim 12 (original): The cartridge of claim 11, wherein the jacket of the primary case also comprises a substantially non-deformable material, such that the primary case jacket is reusable.

Claim 13 (currently amended): The cartridge of claim 1, wherein the propellant mechanism comprises a detonating primer ~~or a pressurized propellant container~~.

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Claim 14 (currently amended): The cartridge of claim 1, a regulator hole being further defined between the primary case and bullet cavities of selected size for regulating a velocity of the projectile upon firing.

Claim 15 (cancelled)

Claim 16 (cancelled)

Claim 17 (original): The cartridge of claim 1, wherein the axial coupling involves the second end of the piston sleeve overlapping the primary case.

Claim 18 (currently amended): A two-piece, two-stage, reduced energy, mechanically operating cartridge of reusable components for launching a bullet of non-lethal, ~~sub-lethal~~ or lethal composition from a dedicated or modified firearm including an annular step at the interface between the chamber and the barrel, comprising:

(a) a piston sleeve comprising a substantially non-deformable reusable jacket defining a bullet cavity at a first longitudinal end for coupling the non-lethal bullet therein, and the second end for coupling with a primary case;

(b) the primary case comprising a substantially non-deformable reusable jacket for being axially coupled with the second end of the piston sleeve, and defining a primary case cavity for coupling with a propellant mechanism;

(c) complementary pairs of partially annular protruding portions (hereinafter "cogs") and channels for coupling the piston sleeve with the primary case, and

(d) wherein the piston sleeve comprises a shoulder such that upon activation when the piston sleeve and primary case are telescoping apart from a static position, a said shoulder of the piston sleeve contacts the an annular step between a chamber and a barrel of the a firearm preventing the sleeve from

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advancing down the barrel, and instead the primary case thrusts rearward away from the barrel.

Claim 19 (original): The cartridge of claim 18, wherein the piston sleeve and the primary case include a complementary annular protrusion and annular groove pair, in addition to the cogs and channels, for coupling together to axially stabilize the coupling of the piston sleeve and the primary case in the static position.

Claim 20 (currently amended): The cartridge of claim 18, wherein the propellant mechanism comprises a detonating primer ~~or a pressurized propellant container~~.

Claim 21 (currently amended): The cartridge of claim 18, a regulator hole being further defined between the primary case and projectile cavities ~~of selected size~~ for regulating a velocity of the projectile upon firing.

Claim 22 (cancelled)

Claim 23 (cancelled)

Claim 24 (currently amended): The cartridge of claim 18, wherein the piston sleeve and primary case are configured such that the axial coupling involves the second end of the piston sleeve overlapping the primary case.

Claim 25 (withdrawn): A two piece, two stage, reduced energy mechanically operating cartridge for launching a projectile of non-lethal, sub-lethal or lethal composition from a dedicated or modified firearm, comprising:

(a) a piston sleeve comprising a jacket defining a projectile cavity at a first longitudinal end for coupling the projectile therein, and the second end for coupling with a primary case; and

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(b) the primary case comprising a jacket for being axially coupled with the second end of the piston sleeve, and defining a primary case cavity for coupling with a propellant mechanism,

(c) wherein the piston sleeve and the primary case include a complementary annular protrusion and annular groove pair for coupling together to axially stabilize the coupling of the piston sleeve and the primary case in a static position, wherein upon activation, the piston sleeve and primary case telescope apart from the static position.

Claim 26 (withdrawn): The cartridge of claim 25, wherein the jacket of the piston sleeve comprises a substantially non-deformable material, such that the piston sleeve jacket is reusable.

Claim 27 (withdrawn): The cartridge of claim 26, wherein the jacket of the primary case also comprises a substantially non-deformable material, such that the primary case jacket is reusable.

Claim 28 (withdrawn): The cartridge of claim 25, wherein the propellant mechanism comprises a detonating primer or a pressurized gas container.

Claim 29 (withdrawn): The cartridge of claim 25, a regulator hole being further defined between the primary case and projectile cavities of selected size for regulating a velocity of the projectile upon activation.

Claim 30 (withdrawn): The cartridge of claim 29, wherein the regulator hole comprises an adjustable valve for regulating propellant pressure to launch projectile at a determined velocity.